REMARKS

By the *Final Office Action* of 9 February 2004, Paper No. 18, Claims 1-4, 9-10 and 17-32 are pending in the Application, and all rejected. By the present *Response and Amendment After Final Rejection*, the Applicant amends Claim 1.

No new matter is believed introduced by the present *Response and Amendment After Final Rejection*. It is respectfully submitted that the present Application is in condition for allowance for the following reasons.

1. US Patent No. 6,337,681 To Martin *Does Not* Disclose The Initiation Of The Calibration Process Anywhere But At The Computer

The present invention is a method and system for calibrating positions on the surface of a location sensing whiteboard to positions on a projected display. There are generally two steps involved in the calibration of a projected image and the whiteboard. The first step is, in essence, to tell the whiteboard that you are ready to begin the calibration process. The second step follows the first, and includes the actual calibration of the display.

As the Title of the application implies, the present invention is directed to the ***first step***, the Initial Calibration Of A Location Sensing Whiteboard To A Projected Display.

While the general calibration of a whiteboard projection and the computer include iterative steps between touches on the whiteboard and the computer, the beginning, or initiation, of the calibration process in the conventional system has relied on a ***first action at the computer***. The present invention overcomes this disadvantage in the art, providing the initiation of the calibration ***not with*** the computer, but preferably at the whiteboard itself.

With all due respect, the Examiner misinterprets the disclosure of Martin as to its particular teaching relative to initiation of calibration, and thus erroneously rejects the present Claims under §102 in view of Martin.

Martin is no different in general configuration from other whiteboard systems, comprising a touch-sensitive screen **1** having an output connected to an input of an electronic touch screen controller **3** installed within a card slot of a personal computer **5**. *Col. 3, Lines 44-48; Fig. 1.* Such a system can be connected to other remote systems of like configuration. *Col. 4, Lines 18-31; Fig. 2.*

The operation of the Martin system begins at the computer. The start-up routine that is begun at the computer, then moves on to well-known calibration techniques between the whiteboard and the computer. ***But it cannot be more emphasized, as to calibration initiation***, Martin is like other prior art systems, wherein the initiation of the calibration begins with a touch at the computer, ***not with a touch at the location sensing device***, as recited by the present Claims.

> With reference to **FIG. 3**, program operation starts at step **100**. ***After start-up of the computer 5***, operational parameters for the program are read in from a default list or data file (**101**), depending upon the nature of the implementation. The values of the operational parameters are then verified for accuracy and validity (**102**). If any of the start up parameters are invalid (**103**) an error message reflecting the nature of the error is displayed (**104**) and program operation is terminated. *Col. 5, Lines 15-23 (emphasis added).*

Thus, at this very point in the Martin system, the computer is touched (started), and the remaining steps disclosed by Martin to get the system ready for operation are next handled in order. That is, upon computer start-up, the calibration steps, as will be shown below, then occur. There is nothing in Martin to suggest that computer start-up occurs anywhere but at the computer. Thus, initiation of Martin's calibration system begins at the computer. This is not surprising, as Martin has nothing to do with some novel or non-obvious way to initiate calibration. Martin's allegedly novelty lies in its capability of handling large scale image projection.

> Various devices are known for displaying information generated by a computer as well as for inputting data into a computer. Examples of the former include CRT display screens and projection surfaces. Examples of the latter include keyboards, mouse input devices and graphic tablets.
>
> Although such prior art devices are useful for displaying information and inputting data into a computer, ***it is believed that no system has hitherto been provided for integrating large scale image projection with data input in an interactive manner.*** *Col. 1, Lines 21-31 (Emphasis added).*

Returning to the disclosure, the Martin system is initiated at the computer, at start-up. After completing a start-up check, the system checks to see if a touch-sensitive screen is attached, or if a digitizer board is attached. *Col. 5, Lines 34-45.*

If a touch-sensitive screen is found in the Martin system, the system automatically moves to the calibration of **Fig. 4**. If a digitizer is found, the system automatically moves to the calibration of **Fig. 5**.

> **FIG. 4** outlines the start-up test and calibration procedure for installation utilizing a touch-sensitive screen **1**. The touch sensitive screen **1** may be defined as a device that is capable of returning to a controlling device, positional information that allows the position of a point that has been touched by some device (e.g. finger, marker pen, etc.) on the surface of the screen to be determined. On entry (**200**), the touch screen interface device or controller **3** is tested for correct operation and installation (**201**). Any set-up procedures that must be completed are also done at this time. If the diagnostics are not completed successfully (**202**), an error message is presented (**203**) and the program is exited.
>
> Upon successful completion of the test procedures, the touch screen interface **3** is reset (**204**) and normal default operational parameters are loaded (**205**). Control is then passed to the network initialization routine (**400**).
>
> **FIG. 5** outlines the start-up test and calibration procedure for installations utilizing a digitizer board. A digitizer board is defined for the purpose of the present invention, as a device that utilizes a fixed geometry structure for determining the position of a sensing device. The sensing device may be a hand-held device with function buttons or a device resembling a common pen. On entry (**300**), the digitizer board interface device or controller (now shown) is tested for correct operation and installation (**301**). Any set-up procedures that must be completed are also done at this time. If the diagnostics are not completed successfully (**302**), an error message is presented (**303**) and the program is exited. Upon successful completion of the test procedures, the digitizer board interface is reset (**304**) and the normal default operational parameters are loaded (**305**). Control is then passed to the network initialization functions (**400**) as discussed above with reference to **FIG. 4**.
>
> If the default input device for the computer is used, positional information is determined from the device access control for the computer. *Col. 5, Line 460 - Col. 6, Line 14.*

It cannot be clearer that Martin initiates calibration upon a touch sensed at the computer, upon computer start-up, through automated steps. The present invention initiates calibration upon detection of a touch at the whiteboard. This is the very essence of at least one distinction between the present invention and Martin, and the Examiner's gloss over how Martin exactly

initiates calibration is error, since the present Claims recite with particularity that wherever initiation is begun, ***it is not at the computer.***

This is one very important aspect of the present invention, which is clear from the originally-filed *Specification*. Conventional calibration systems incorporate disadvantages, as noted in the present application:

> One of the complications present in using electronic whiteboards is the calibration of the whiteboard. Calibration is necessary so that the computer can properly relate positions on the whiteboard to locations on the computer display device, and thus, properly interpret touch inputs detected on the surface of the electronic whiteboard. ***Typically, calibrating the electronic whiteboard involves the user operating at the computer, rather than at the electronic whiteboard, to start a calibration. Then, after the user initiates the initial calibration at the computer, the user must perform a calibration of the electronic whiteboard.*** This complicated procedure, usually calling for the assistance of another person, scares novice technology users away from electronic whiteboard technology, and overcomplicates the set-up process for those who do use electronic whiteboards. *Specification, Page 2, Lines 7-17 (emphases added).*

The present invention overcomes the disadvantages in the prior art by providing the location of the first step of the calibration process ***not at*** the computer (***that is, not requiring the user to begin the calibration process at the computer)*** like that required in Martin. In the conventional process, the user touches the computer to begin the calibration process, then must move to the whiteboard to run the calibration and begin the presentation.

The improved process of the present invention enables one to begin the initiation of the calibration process without being directly at the computer to start the process, so the presentation is not broken up by the user moving between the computer and the whiteboard. In preferred embodiments, the user can begin the calibration process at the whiteboard via interaction with the whiteboard surface or through a voice command.

> The physical surface of the electronic whiteboard **100** includes a menu bar **106**, which in the exemplary embodiment, includes a calibration button which is the predefined location for beginning the calibration sequence once touch is detected. However, those skilled in the art will appreciate that the predefined location may be not only a logical calibration button on a menu bar **106**, but any predefined location or command which may be programmed to begin the calibration sequence, such as an actual physical button located on the frame of the whiteboard, on the whiteboard surface, or

> remotely from the whiteboard frame or surface. Alternatively, the calibration sequence may also be initiated by a detected voice command. *Specification, Page 4, Lines 22-30.*

This improvement to the calibration process of the present invention eliminates the need for two assistants, one to start the calibration at the computer, and another to then run the calibration at the whiteboard. The present invention enables just one user to remain in proximity of the whiteboard to initiate and run the calibration. As disclosed:

> ... the present invention is [a] "one-touch" initial calibration process and system for a location sensing electronic whiteboard. The calibration method and system of the present invention overcomes the complications posed by the prior art by providing an easy and simple way to calibrate an electronic whiteboard. ***A mechanism on the electronic whiteboard signals the computer to begin the calibration procedure before the computer has projected a GUI (graphical user interface) onto the electronic whiteboard surface.*** *Specification, Page 2, Lines 23-29 (emphases added).*

In view of the above, the pending Claims recite improvements to the conventional calibration process, which conventional process comprises:

- providing a location sensing device;
- providing an electronic device;
- initiating the calibration *at the electronic device*, and
- performing the calibration of positions between the location sensing device and the electronic device.

The present invention provides an improvement that the step of initiating the calibration be ***at a location different than the electronic device***, preferably being at the whiteboard itself, or in proximity to the whiteboard via a button or device capable of receiving voice commands.

2. Claim Rejections

Claims 1-4, 9-10 and 17-32 are rejected under 35 U.S.C. § 102(e) as being anticipated by Martin. Applicant respectfully traverses these grounds of rejection. The Examiner first errs in alleging that Martin discloses, in view of Claim 1:

> Initiating the calibration of positions between the location sensing device and the electronic device upon the detection of the touch on the surface of the location sensing device (Col. 5&6, lines 63-67 & 1-12). *Final Office Action, Page 2.*

A review of these two particular sections of Martin does not disclose what the Examiner alleges.

Col. 5, Line 63 – Col. 6, Line 12 of Martin states:

> **FIG. 5** outlines the start-up test and calibration procedure for installations utilizing a digitizer board. A digitizer board is defined for the purpose of the present invention, as a device that utilizes a fixed geometry structure for determining the position of a sensing device. The sensing device may be a hand-held device with function buttons or a device resembling a common pen. On entry (**300**), the digitizer board interface device or controller (now shown) is tested for correct operation and installation (**301**). Any set-up procedures that must be completed are also done at this time. If the diagnostics are not completed successfully (**302**), an error message is presented (**303**) and the program is exited. Upon successful completion of the test procedures, the digitizer board interface is reset (**304**) and the normal default operational parameters are loaded (**305**). Control is then passed to the network initialization functions (**400**) as discussed above with reference to **FIG. 4**.

Applicant is at a loss where this particular disclosure of Martin anticipates the recitation of Claim 1 "***initiating*** the calibration of positions between the location sensing device and the electronic device ***upon the detection of the touch on the surface of the location sensing device***." Nowhere in the above disclosure of Martin, nor in the entire reference, is it disclosed that initiation of calibration begins upon the detection of a touch, not at the computer, but at the location sensing device. Indeed, Martin discloses the contrary, that upon computer start-up, the calibration process is begun.

As to the rejection of Claim 2, which recites that the step of detecting a touch comprises detecting actuation of a ***physical button located on the surface of the location sensing device***, the Examiner alleges this is found in Martin at *Col 11, Lines 62-65*. Applicant traverses this allegation as well.

Figs. 3-12 of Martin inescapably indicate that the calibration procedure is performed as part of a start-up initialization sequence. **Fig. 11** shows that during initialization, the software determines if "a touch board is being used" (**903**). If so, the calibration is performed (**1001**). There is simply no disclosure in Martin of starting a calibration from ***a button on the surface of the location sensing device***, or for that matter, in any other user-activated way aside from

clicking a "re-start" button on the computer screen. *Col. 8, Line 24.* The ***projected*** re-start "button" of Martin cannot be clicked on the large screen display, because until the screen is calibrated, the position of a projected "re-start" button cannot be located on the large screen display.

The word "button" in *Col. 11, Lines 62-65* on which the Examiner appears to focus is referring to a physical button attached to the touch-screen controller (3). This is unrelated to the button of pending Claim 2. The control signal of Martin causes the driver to execute an interrupt service routine in response to at least one of (i) a touching of the large-screen display surface, and (ii) a pressing of a button. It is clear that this Martin button ***is not*** part of the large screen display surface.

The "interrupt service routine" **(1700, Fig. 20)** which is referred to in Martin also is not related to the initialization sequence, but is rather a separate routine that does not affect calibration along any path of the flowchart. Therefore, when the button describe in Col. 11 is pushed, it could not affect the calibration in any way.

The Examiner continues to similarly misidentify what is disclosed in Martin against all the pending Claims.

The Applicant suggests that, in essence, Martin discloses a projection display system incorporating a whiteboard. The system can be interconnected (networked) and supported by a voice conferencing system. The Applicant admits the Martin system includes a calibration procedure. Further, the Applicant admits the Martin system can include buttons. But such prior art systems have no anticipatory value against the specific recitation of the pending Claims, regarding where to initiate calibration (distant the computer), and how to initiate calibration (a button on the surface of the whiteboard).

Martin discloses a general calibration process. Although largely silent on how to initiate the process, Martin discloses beginning the calibration process at the computer, not unlike prior art systems.

The present Claims are directed to a specific ***method of calibrating***, preferably, a whiteboard with a computer. All the Claims specifically recite that calibration is initiated ***not at the computer***, but preferably upon the whiteboard surface itself. Martin provides no teaching on

this point. It is submitted that Martin neither anticipates, teaches, nor suggests the present invention, and the generalities the Examiner attributes to Martin's disclosure fall far short of providing anticipation rejection arguments.

While the Examiner rejects the Claims under § 102 with US Patent No. 6,337,681 to Martin, the Examiner curiously recited US Patent No. 6,141,000 to Martin against a portion of the pending Claims in the Examiner's Response to Applicant's Arguments. *Final Office Action, Page 5.* Here, the Examiner cites '000 Martin at *Col. 5, Lines 30-36* to show that this reference teaches calibration initiation at the whiteboard.

> If, on the other hand, it is determined that this is a first load operation, the type of input device connected to computer **5** is determined from the start-up parameters, and an appropriate calibration procedure is invoked. Specifically, a test is made **(106)** to see whether the input is a touch-sensitive screen (e.g. screen **1**). If it is, the initialization routine for the touch sensitive screen **1** is entered **(200)**.

Yet again, the Applicant is left wondering how this disclosure anticipates the pending Claims, as fully detailed above.

3. The Claims

i. Claims 1-4

As to Claim 1, it has been further clarified to recite that initiating the calibration of positions between the location sensing device and the electronic device can ***only*** occur upon the detection of the touch on the surface of the location sensing device.

Claim 1 specifically recites that the initiation of the calibration occurs in response to a touch on the location sensing device, ***not*** the electronic device. Martin discloses a general calibration procedure for its system, but nowhere teaches or suggests how such calibration procedure is ***initiated.*** The present invention is not a general calibration method, over which Martin could be cited. The present invention is a specific initiation methodology that is neither taught nor suggested by Martin.

It goes without saying that every calibration method must begin somehow (by activation of something) and somewhere (the activation must occur at a location). To cite Martin for the general proposition that it discloses initiating a calibration procedure, and then to use such

disclosure as anticipating prior art for a Claim drawn specifically to "initiating the calibration procedure distant the computer", is error.

Martin does not disclose, among other novel and non-obvious inventions:

- Initiating a calibration process distant the computer;
- Initiating a calibration process at the whiteboard;
- Initiating a calibration process by pushing a button at the whiteboard;
- Initiating a calibration process by voice command.

Claims 1-4 specifically recite that the ***initiation*** of calibration begins at ***the location sensing device***, and Martin does not anticipate that claimed step. Claims 2-4 are even further distinguishable from Martin, as these Claims recite that the initiation specifically incorporates the step of detecting actuation of a ***physical button*** located at the location sensing device, or a ***projected button*** (icon) on the surface. While Martin discloses a system that may include a button (no specifics on what the button is for), this disclosure in no way can anticipate the step of initiating the calibration with an activation of a button.

The Examiner points to the following disclosure as providing anticipation for the present invention's "calibration button":

> The touch-sensitive screen interrupt service routine is invoked whenever any event occurs relating to the screen 1. This includes touching the screen, picking up a pen, pressing a button, or any other operation performed by the screen 1 or its interface 3. *Col. 11, Lines 60-65.*

Again, this discloses only that the Martin system has an interrupt service routine that could be activated by a push of a button. This is unrelated to the present invention. Claims 2-4 do not recite that the present system has a button, but specifically recite that the present invention has, in essence, ***a calibration button***. Such a calibration button is not found in Martin. This is not surprising, as Martin is basically silent on how to initiate the calibration procedure, and thus silent on whether the initiation step is begun with the activation of a button. Not only is **Fig. 12** and the text of Martin silent on such a "calibration button", but **Fig. 13a** sheds no light on such. **Fig. 13a** appears to show a projected image, but not of an initiation step for calibration, but a projected image of a calibration step after the procedure has begun.

ii. Claims 9-10

Claims 9-10 are not anticipated by Martin, as Martin does not disclose at least the following recitation of these two Claims:

a calibration initiation means distant the electronic device.

iii. Claims 17-27

Claims 17-27 are not anticipated by Martin, as Martin does not disclose the following recitation of these Claims:

an improvement wherein the step (iii) of initiating the calibration comprises initiating the calibration at a location distant the electronic device.

Claim 27 is further distinguishable from Martin, as it recites that the step of initiating the calibration at a location distant the electronic device comprises ***initiating the calibration with a voice command***. Martin makes no reference at all to such a step.

The Examiner points to disclosure in Martin that describes that the Martin system may include several user locations that may be connected via a *voice conferencing system* and then holds that this disclosure of Martin anticipates the presently claimed "step of initiating the calibration ...with a voice command". This could not be more unrelated to the claimed invention.

That Martin supports voice conferencing has no bearing on the presently claimed recitation that a voice command begins the calibration procedure of the present invention. Applicant respectfully requests reconsideration of this ground of rejection.

iv. Claims 28-32

The Claims are similarly novel over either Martin, for the many reasons outlined above, as each recites that the initiation of the calibration procedure occurs at the whiteboard, as opposed to the computer, a location of initiation not disclosed in Martin.

4. Fees

This *Response and Amendment After Final Rejection* is being filed within six months of the *Final Office Action*, and more specifically within two months, thus no extension fees are believed due.

This *Response and Amendment After Final Rejection* has not altered the number of pending Claims. Thus, no Claim fees are believed due.

Nonetheless, should any further fees be due, authorization to charge deposit account No. 20-1507 is hereby expressly given.

CONCLUSION

By the present *Response and Amendment After Final Rejection*, the Application has been in placed in full condition for allowance. Accordingly, Applicant respectfully requests early and favorable action. Should the Examiner have any further questions or reservations, the Examiner is invited to telephone the undersigned Attorney at 404.885.2773.

Respectfully submitted,

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